

## Recognition of the Role of Bricks and Brick Structures in the Human: A Case Study in Kermanshah, Iran

**Hamid Reza Gholami**

Department of Architecture, Kermanshah branch, Islamic Azad University, Kermanshah, Iran

\*E-mail: [Gholami.hr1991@gmail.com](mailto:Gholami.hr1991@gmail.com)

### Abstract

Body of brick architecture like the human body aroused from the soil as the body and returns back into the soil again. This heterogeneity makes the soil architecture compatible with the human nature. Various forms of the nature and soil architecture in the traditional buildings depend on Islamic architecture, and our nature is human spirit and intrinsic qualities of nature are introduced as the basis of life and spirit. The nature is the universe of objects and appearance. A lot of soil products are produced in this region. Favorable climatic conditions in the city of Kermanshah provided the ground for using soil products. Later, the bricks were known as the main materials of living. The purpose of this study was to evaluate the effects of brick materials and make a sense of belonging within the context of the historical city of Kermanshah. In this study, we tried to evaluate psychological impact of bricks from different aspects by a cross - sectional approach. Finally, the results indicated that soil materials in the form and meaning are consistent with human nature. Soil reduces energy consumption in the buildings.

**Keywords:** brick psychology, soil architecture, brick, traditional texture, traditional structures, brick structures

### Introduction

In the analysis of architectural composition and texture of city and villages, we realized the obscure point that the climatic factor plays a significant role in giving logical form to the urban texture and architectural composition of these cities and climatic problem were mentioned as an acute problem for the people of this area. At the present era, numerous theories with different ways of thinking explained the relationship between human and nature.

Following them, architectural approaches to the nature also appeared in different levels and through different ways. The nature was always considered as the foundation of architectural theories formation.

Traditional architecture for the Islamic period particularly in the residential buildings in the western areas is a good example of harmony between architecture and the nature at a supreme and deep level which arise out of Islamic architectural model. From a deeper point of view, it can be stated that in the nature there is nothing other than the Divine truth which is manifested through phenomena.

One of the most valuable cases of these solutions for answering the problems of climatic weather which can be seen in the historical city of Kermanshah is to lower the level of contact with the outer surface to prevent the transfer of outside temperature to the inside and finally to avoid the cold weather of coldest areas which plays important role in the compact composition and the package of complexes.

Here the research method is to use consolidated research strategy, logical reasoning method with a qualitative method.

### **A journey in the background of brick**

Persian brick (A'jor) is the Arabic form of A'gor (Parto, 1994:12), A'joor, Ajr, Ajoor, A'ghr, A'gor, Sagh (Rafiee Sereshki, (1992:22) and Arab Agoor (Dehkhoda, 1998:73) that in ancient Persian (Agoom, in Kurdi of Mahabad is called Kheshto Sour and in Sistan is called Kork (Rafiee Sereshki, 2002:22). Brick in the dictionary of traditional architectural terms of Iran is introduced as Baked mud, Clay rectangular cube. Brick was elsewhere introduced as a Babylonian word. Clay was the name of writings on which Charter Decree was written (Hami).

It is unclear when the first brick is used, we suppose that first human observe that the clay of their stove and founding that the backed clay is tougher than its nearby hunks. So, they realized its benefits and how to produce it. Brick has been long used as an important building material.

Human form of the traditional point of view is a creature which descended from a dimensionless and supreme world to a dimensional and limited world. And, it is temporarily living in this world and grows and returns again to that supreme world. The earth is created for him and he is responsible to develop it. He is also aware that he is not lasting here his evaluation of land remains in land and his heavenly part returns to its origin.

### **The relationship between human body and soul**

In dictionary, the nature is defined as essence, foundation and the nature according to which people are created, thus, nature is compatible with human's nature and basis. According to the Islamic point of view, humans are created from two separated parts of body and soul. Soul is powerless without its vehicle and the body is lifeless without the soul. The body is made of the soil and the soul has a divine essence, consequently, architecture should form appropriate for each. The body should be relaxed and the soul should grow and develop.

The nature in this regard includes inherent, fundamental and inevitable characteristics. The nature with these features is applied to differentiate and give identity to something particularly spiritual, internal and immaterial identity which is manifested in the move and activities of that element.

### **Compatibility of human essence and nature**

Most scientists such as Ibn Sina and, Akhavani Safa and Abo Reihan believe that nature as the driving force and the principle of change leads the element to natural and intrinsic perfection as much as possible, with such a point of view, the nature is the active aspect of movement and the divine truth expansion (Nasr, 1980:92).

Human is composed of soil and non-soil parts. As mentioned before one is not human without the other. It means that the nature and human essence is combined with soil. Some scientists and wise people such as Molavi did not give credit to the body and considered the body as the prison of soil but it is different in other hakims such as Hafiz and he believes that nature is the tool and context of bodily growth.

In different points of views, the type of attitudes towards the nature is different for example some do not believe in the nature discipline and that this nature has a ruler and creator. Therefore, they do not believe in the dignity of nature and see it as incomplete.

But artists such as Brunelleschi, Paxton, Victor Orta, Antonio Gaudi Wright, Aalto, Le Corbusier, Arvsnaryn, Calatrava, etc. who used the nature in their architecture show that the nature can be a source of aspiration for architecture.

### **The impact of the environment on the human mind**

Human is a creature that changes both physically, mentally and emotionally over time and changes his surrounding environment simultaneously (Arian Pour, 1976: 56-57).

The thinking of intrinsic human unity with the nature indicates that intrinsic quality and inherent features of the nature is the foundation of human soul. So, in the Islamic attitude, the nature with regard to the human is the birthplace of human soul, the same as his essence and in the meanwhile is a complete context for his perfection.

On the other hand, domination of the nature over the humans and the fact that the humans are divine caliphates puts a responsibility of nature on human shoulder while benefiting from it (Nahj-Ol-Balagheh: 1988:544). The public rule of the nature is evolution and perfection (Tabatabaiee, 1989, Nasr, 1980).

Psychologists believe that changing the environment is not desirable and ruins the feeling of spatial belonging. The sense of belonging calms the human and in the absence of it there is no comfort for humans. One of the reasons for anxiety in humans residing in cities is daily change of faces that every day gets away from its past more than before. We should have a presupposition about everything to motivate our feelings that is called memory presumption.

In psychological analysis, human environment is not separated from his natural environment rather human as an inseparable dimension from the environmental condition of the study.

The point especially taken into account in architecture is the role of architecture in design particularly elements used in buildings on the spirit of humans that want to use a building or a residential location. Therefore, observing psychological points in the designing is very important that should not be ignored. In this regard, currently most people paid attention to new areas of architectural psychology or psychological architecture.

Psychiatrist, Carl Gustav Viung, a Swiss scientist believes that even memories of past generations, genetically transmitted to the next generation, as a result there are presuppositions in our mind that visiting some places motivates a familiar sense in us and we find a sense of belonging towards them and feel comfortable in them (Riazi Dehkordi, 2008:14-18).

One of the factors of balancing life is the culture. Culture balances the body and mind and society and over all a balance between the individual and his outside world. Our culture is an assessment of our culture by removing it physically, in fact the balance between the body and mind is destroyed.

### **Soil of the nature and compatible with human**

Human is created from soil and returns back to it. Islamic architecture (Iranian structure) is one of the greatest manifestations of an artistic fact in a material body. Iranian-Islamic architecture is considered as a great branch of Islamic art could institutionalize a large part of characteristics of Islamic art over time and during different periods.

Iranian-Islamic architecture can be known as a mirror that the main Islamic and spiritual teachings of Islamic wisdom are reflected in it. The Islamic city slowly arises out of the soil and uses the natural resources optimally and when is emptied from its residents goes again to the soil (Nasr Sayed Hossein).

### **Making brick out of soil and its compatibility with human nature**

Over a specific period of time architects tried to provide a desirable mental and environmental comfort for their inhabitants. In order to do so they used maximally the available elements in the environment. Scientists and ancient people believed that humans are composed of soil and return to the soil. Nasr Sayyed Hasan says: "the Islamic art arises out of the soil and used the natural resources and when it is out of residents, it slowly returns to the soil. Why the human

dwelling became so obnoxious and the life so boring that the humankind who is a reason for this more than anything else and is forced to escape from these areas who himself stoked to defame them it and transfer this pollution to still-clean areas of the ground so to pollute there?

Why human consumption should be so much and their needs are saturated apparently.? In Islamic architecture (theory and natural), nothing indicates scramble and limit and there is no struggle and contradiction between heaven and earth and all parts are being completed. Lack of attention to meaning and spatial quality and ignoring the environment influence on human psyche is not taken into account. In the meanwhile, we believe that human is a part of the soil nature and its close relationship with the nature leads to his survival and this is emphasized in Islamic teachings.

Recognition of the brick role as one of the natural elements plays a significant role in life. Soil and soil architecture is medium in which different lives occurs. The soil is highly capable in motivating human mind and all humans are really interested in soil.

Brick is appropriately related to other elements and the nature. Brick and brick structures, either hidden or obvious, have a significant role in forming the traditional texture. Direct presence of natural elements in residential buildings is a divine issue and in fact the way of natural element presence in the man-made space indicates how traditional man view to the nature is in its spiritual and inherent aspect.

In the past, architecture by recognizing the principles, features and behavior of the soil (the nature and inherent aspect) and understanding the role and allegory of its relation with human enters the soil into the architecture and by its assistance gives effects to the centrality and unity in the architecture.

### Conclusion

The present study considered the relation between architecture and nature. The body of brick is made of soil like the human body. This heterogeneity causes the compatibility of human essence with soil architecture. Human from the traditional point of view has a duty. He is responsible for land development and believes that the entire world is an integrated and related super-system and that their nobility is derived from builders and users. Humans have an integrative point of view and consider the whole world as a united body. The brick is appropriately related to other elements as well as the nature. The soil brick glorifies the unity in architecture. It plays a significant role in the composition. It is a medium occurred in the processes of life. The soil is highly capable of motivating human mind and he is greatly interested in it. Soil material is compatible with human nature with regard to form and meaning and concept. And cause balance between body and mind. Also, soil architecture is very compatible with the nature with regard to the environment.

### References

- Ardalan, N. & Bakhtiar, L. (2001). Sense of unity. Translated by Hamid Shahrokh, Soil publication, Isfahan.
- Aryanpur A. H. (1975). Sociology of Art, Fine Art Society, Tehran: Second Edition.
- Parto, A. (1994). Equivalents of English vocabulary word finder alien culture. Mythology, Tehran: First edition.
- Dehkordi Riahi, A. (2009). The impact of the environment on the human psyche. Institute for Human Sciences, Tehran.
- Eslah chi, A., Darykvandy, S. & Sheikh al-Islami N. (2006). Psychological effects clay of bricks in the traditional texture. Sustainable architecture and urban development conference.
- Naghi Zadeh, M. (2005). The place of nature and Environment in Iranian cities Culture, Science and Research Branch, Islamic Azad University, Tehran.
- Pirnia, M. K. (1990). Iranian architectural styles. Islamic Art publication, Tehran, Third Edition.

- Qobadian, V. (1994). Assessment of Climate of the traditional buildings of Iran. Tehran University Press Publications.
- Rafiee Sarkeshi, B. (2002). Culture architecture (architecture). Building and Housing Research Center, Tehran, First Printing.
- Shokohi Nia, D. (2004). Dictionary of architectural terms. Ashrafi, Tehran, First Printing.
- Wilbur, D. (2005). Iranian gardens and its palace, translated by Mahindokht Saba, Translation and Publication Firm, Tehran